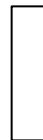




**Testing & Training**  
**The Art of  
Compromise**

**Harold C. Pasini, Jr.**  
**US Army Operational  
Evaluation Command**  
**18 Aug 99**





# OPTEC Mission

Plan, conduct, and report *Independent Operational Tests*, integrate *Operational and Developmental Evaluations* and assessments of Army materiel and information mission area systems to include joint and multi-service systems.

Plan and conduct *Live Fire Evaluations*.

Plan and conduct *Force Development Tests and Experiments* in support of TRADOC's combat development process and *Advanced Warfighting Experiments*.

Manage Army's *Continuous Evaluation Program*.



DoD Policy: "... provide evaluations of system's effectiveness, suitability, and survivability"

-- DoD 5000.1 & DoD 5000.2-R, 15 Mar 96



# Integrated Test & Evaluation

## System Test & Evaluation

Effectiveness

Suitability

Survivability



Evaluation  
Plan

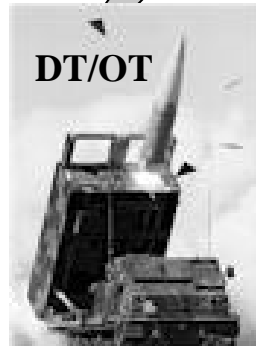
INTEGRATED  
STRATEGY



## Developmental Tests



DT/OT



System  
Evaluation  
Report

Single Evaluation Report  
provided before each milestone



# OPTEC T&E Philosophy

- **Early Involvement**
- **Testing to Learn**
- **Integrated Testing & Evaluation**
- **Modeling and Simulation**
- **Use of Training Events**
- **OPTEC System Team**





# Use of Training Events

- **Reduced force structure/increased deployments**
- **Constrained fiscal environment**
- **Cost savings**
- **Requires innovative test design**
- **Examples**



- **JSTARS (Bosnia) FY96**
- **C-17 (Russia) FY97**
- **CCTT (NTC Train-Up) FY98**
- **ASAS RWS (III Corps WFX) FY99**
- **SSP (Haiti) FY97**
- **SOA (Unit Msn Trng) FY95/97/99**
- **CSSCS (III Corps WFX) FY96**



## **Key Elements for a Successful Training & Testing Event**

- **Extensive and Frequent Coordination between T&E Team and Training Leaders.**
- **Training Commanders generally require that the test elements be transparent to the exercise.**
- **“Right size” the expectations of both the T&E Team and the training community.**
- **T&E Team understands the training objectives, scenarios, simulators being used, granularity and fidelity of simulations, etc.**
- **Establish non-interference agreement with test unit and determine level of access of T&E personnel.**



# Advantages

## To T&E and Acq Communities

- More affordable T&E
- Realistic Operational Environment
- Significant amount of data available
- Large number of exercises; varying in size, purpose, duration
- Good deployment data
- “We train the way we fight”

## To Training Community

- More affordable training
- Potential for augmented threat
- Modified after action reviews
- Great opportunity to employ new systems
- SME feedback
- Interoperability opportunities



# Challenges

- **Difficult to impossible to obtain “ground truth”**
  - especially necessary for most quantitative performance measures
- **Uneven sample sizes hinder analysis**
- **Errors normally corrected during pilot tests limit effectiveness of event**
- **Limited ability to determine causality**
- **Limited or no control of:**
  - Scenario / Ground truth / Simulations and Intel feeds / Operators**
- **Doctrine / SOP's / TTP's**
- **More reliance on qualitative data**





BN FTX

# Summary

Corps CPX

NTC

Corps Warfighter

Unit Gunnery

- If expectations are managed and compromises are understood, then testing and training events can be accomplished with beneficial results to all.
- However,
  - Testing and training events generally do not provide sufficient meaningful data to support production and fielding decisions
  - These events do provide a large portion of meaningful data that can assist in answering a limited number of Measures of Performance

Unit Msn Tng

Purple Dragon